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ABSTRACT

An evaluation was made of the vocational assessment processes for special populations (disadvantaged and handicapped) in the secondary schools in Ohio. A survey instrument was developed and mailed to the 77 vocational evaluators in Ohio, with a 65 percent return. In addition, each of the 125 vocational special needs coordinators in Ohio was asked to submit five randomly selected vocational assessment reports and their corresponding individualized Education Programs (IEPs). The information gathered from these two groups, after evaluation by a focus group, was used to determine training needs for vocational evaluators. The following are some of the recommendations made as a result of the project: (1) provide inservice training to evaluators on assessment practices; (2) provide a systematic approach for informing evaluators about minimum competencies and specific abilities needed for vocational programs; (3) provide inservice training to promote increased use of various types of evaluation methods; (4) provide inservice support for improved reporting; (5) provide inservice to help special educators use assessment report information in writing IEPs; (6) develop a systematic approach to informing students about vocational education opportunities and requirements; and (7) offer inservice support to all school personnel in the area of transition from school to work. Appendixes include the survey instrument, the Assessment Report/IEP Analysis Coding Form, a list of definitions, and a list of consultant panel members. (KC)

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A STUDY OF THE VOCATIONAL ASSESSMENT PROCESS AS APPLIED TO VOCATIONAL EDUCATION

Final Report

Shirley A. Chase
Margo V. Izzo
Matthew Dunfee

U.S. DEPARTMENT OF EDUCATION
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FOREWORD

The major purpose of the project was to examine the vocational assessment process used in Ohio Vocational Assessment Centers to determine if current practices are meeting the intent of the Carl Perkins Act.

The contributions of panel participants, survey completers, IEP and Vocational Assessment Report contributors and reviewers are gratefully acknowledged.

The National Center is indebted to Dr. Shirley A. Chase and Margo V. Izzo, co-directors of the project. Other National Center staff who contributed to the development of the survey instrument include Dr. Louise Vetter and Dr. Paul Campbell, Senior Research Specialists. Linda Buck, Vocational Special Education Coordinator, Southeast Vocational School, also contributed to the development of the survey instrument. Lawrence Dennis, Liaison Supervisor, Vocational/Special Education State of Ohio Department of Education and Richard A. Macer, Assistant Director, Special Needs Services, Ohio Division of Vocational Education, supported the effort by reviewing the survey instrument and providing assistance in obtaining the data.

Recognition also is due Trent Jay, computer programmer, and Amber Denny, Cathy Thompson, and Matthew Dunfee who coded the data. Marjorie Dellinger organized the survey data and provided word processing assistance along with Janet Ray. Betty Martin and Judy Balogh provided the final editorial review.

Ray D. Ryan
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

The purpose of this project was to examine the vocational assessment processes for special populations (e.g., disadvantaged and handicapped) in the secondary schools of Ohio. Based on this examination, priorities for future projects and for training initiatives were identified and funding sources were explored.

The vocational assessment processes in use in Ohio Vocational Assessment Centers were examined to determine if current practices are meeting the intent of the Carl D. Perkins Vocational Education Act. The Perkins Act mandates the assessment of interests, abilities, and special learning needs of each special needs student.

A survey instrument, developed by National Center staff and support by the Ohio State Department of Education, was mailed to each of the 77 vocational evaluators in Ohio. Fifty (65 percent) of the completed survey instruments were returned. Data from the survey were analyzed.

A request was made of each of the 125 vocational special needs coordinators in Ohio to submit 5 randomly selected vocational assessment reports and their corresponding Individualized Education Program (IEPs). The vocational assessment reports and the IEPs were studied to determine the impact the vocational assessment had on the student's educational plan. This analysis information, in addition to

the survey instrument data, served to provide a basis for determining training needs of vocational evaluators.

A focus group of nine experts in the field was asked to review and discuss the data and to assist in making recommendations for training needs of vocational evaluators.

Project staff hosted a meeting with representatives of the Ohio State Department of Education, Division of Career and Vocational Education, to ensure that the results of the project would help them meet the training needs of the vocational evaluators throughout the state.

The following recommendations were made as a result of the project work:

1. Provide inservice training to evaluators on practices for assessing students with visual impairments, multihandicaps, or orthopedic handicaps.

2. Provide a systematic approach for informing evaluators about the minimum competencies and the specific abilities necessary to successfully complete the vocational programs.

3. Provide inservice training to promote the increased use of situational assessments, locally developed work samples, and locally developed norm data, rather than commercial work samples.

4. Provide inservice support so that recommended special services, which include, according to the Carl D. Perkins Act, adaptation of curriculum, instruction, equipment and facilities, are clearly stated in assessment reports.

5. Provide inservice support so that Special Educators can better use the information found in assessment reports in writing IEPs.

6. Develop a systematic approach to informing students about vocational education opportunities and eligibility requirements.

7. Offer inservice support to all school personnel in the area of transition from school to postschool employment and career opportunities.

CHAPTER 1

INTRODUCTION

Background

In 1984 passage of the Carl D. Perkins Vocational Education Act mandated an assessment of the interests, abilities and special needs of each handicapped and disadvantaged student with respect to completing successfully the vocational education program. This assessment must indicate what special services, including adaptation of curriculum, instruction, equipment and facilities, are necessary to meet the specific needs of the special population students who enroll in vocational education. Also, guidance, counseling and career development activities conducted by professionally trained counselors must be provided to special populations so that their transition from school to post-school employment is successfully facilitated (Perkins Act, 1984).

The need to provide comprehensive career/vocational assessment for special populations has been evident in many quality vocational programs for many years. The state of Ohio has had vocational assessment centers in vocational schools for over a decade. The Perkins Act, however, has encouraged many more school systems to establish vocational assessment units. Recent estimates have indicated that over 17,000 vocational assessment

centers have been established across the country during the 1985-86 and 1986-87 school years. These centers can be helpful to both vocational and special educators in determining career/vocational guidelines for students by:

- o providing an assessment of the student's interests abilities and specials needs;
- o encouraging students to explore a variety of occupations
- o recommending appropriate placement in vocational education as well as the support services necessary for successful completion of that program
- o recommending appropriate job placement (Neubert, 1982)

Unfortunately, vocational assessment has not always provided assistance in instruction or student development, and, at its worst, has actually become an impediment, taking up valuable student and staff time and resources (Peterson 1985b). Many vocational assessment reports identify a student's weaknesses in terms of aptitudes (or lack of aptitudes). These reports fail to provide meaningful information to students, parents, and educators that will assist them in making sound educational decisions (Peterson 1985a, Peterson 1985b). Vocational Assessment process, at its best, should be an ongoing process throughout a student's school experience that supports the awareness, exploration, and preparation stages of vocational development (Cobb 1983, Peterson 1985b, Phelps and McCarty 1984, Sitlington 1979).

A National Survey

In 1981, Michael Peterson conducted a survey of officials in state departments of vocational education, special education, and rehabilitation to determine what the policies and trends were toward development and expansion of vocational assessment/evaluation in school settings. In total, 103 questionnaires were returned with at least one agency represented from 49 states. Seventy-five percent of the respondents to this survey indicated a need to revise or create policies related to vocational assessments. Two items on the questionnaire dealt with perceived needs and plans to increase the availability of vocational assessment. A large majority of the respondents indicated a need for plans to increase the availability of vocational assessment (Peterson 1985a).

Two major findings appear evident from this survey: (1) a focus on vocational assessment in schools by state department personnel is increasing, and (2) there is considerable disagreement among state officials as to how to best implement vocational assessment. These findings appear to indicate that state department officials are receptive to implementing a vocational assessment process. However, lacking an accepted implementation model, they indicated that significant efforts need to be expanded to develop procedures for implementing vocational assessment in schools in the coming years.

The discrepancy between how the vocational assessment process is currently used, and how the Perkins Act and experts in the field suggest it should be used, is wide indeed. The American Vocational Association recognized this discrepancy and organized a Symposium on Vocational Assessment at the 1985 annual AVA convention. This symposium invited papers from experts in the areas of vocational education, special education and school psychology.

The experts agreed that vocational assessment is a developmental process that should begin with an exploration of the various vocational education program alternatives and end with an evaluation of the appropriateness of the programs and the various services that will be provided to the individual so that he/she can successfully complete the transition from vocational education to employment.

Purpose and Objectives

The purpose of this study is to examine the vocational assessment process currently used in Ohio to determine if current practices are meeting the intent of the Perkins Act. Through a survey of vocational evaluators across Ohio, project staff have determined the training needs of vocational personnel including administrators, counselors, instructors and evaluators in terms of meeting the requirements of the Perkins Act.

Project staff also collected vocational evaluation reports and the corresponding Individualized Evaluation Plan (IEPs) of students with disabilities to analyze the impact the assessment report had on each handicapped youth's educational program.

A focus group of vocational evaluation experts and state policy makers were invited to discuss the results of the data collection effort. This focus group prioritized training needs for vocational evaluators, vocational educators and special educators (special/vocational personnel).

Project Goal and Objectives

The goal of this effort was to examine the vocational assessment process for special populations in the secondary schools in Ohio. Based on this examination, priorities for future projects and for future training initiatives were to be identified. This goal was realized through the following objectives:

1. Conduct a survey of Ohio vocational assessment centers to identify the assessment process used to determine a student's interests, abilities, and special learning style as mandated by the Carl Perkins Act.

2. Analyze vocational evaluation reports and their corresponding IEP documents to estimate the amount of impact the vocational evaluation had on educational programs for the special population student.

3. Conduct a focus group meeting of experts to determine priorities for future research, training initiatives and possible funding sources for these initatives.

CHAPTER 2

METHODOLOGY

The vocational assessment survey and the analysis of vocational assessment reports and their corresponding IEPs were conducted to determine the training needs of vocational administrators, instructors, counselors, and evaluators in terms of meeting the requirements of the Carl Perkins Act. The Perkins Act specifies that there be an "assessment of interests, abilities, and special needs of such students (handicapped and disadvantaged) with respect to completing successfully the vocational education program."

Survey Data Collection

The initial survey form was developed by project staff. Input was then obtained from experts of the National Vocational Assessment Training Center who are listed in Appendix D. Input was made by other national experts, Lloyd Tindall, Jim Green and Howard Garker at the Big 10 Consortium annual meeting in Columbia, Missouri, October 28-29, 1986. Many constructive recommendations also were made by Lizanne DaStefano of the

Secondary Transition Intervention Effectiveness Institute located in Champaign, Illinois. The survey form was revised based on these recommendations.

Project staff visited the Southeast Joint Vocational School to observe their vocational assessment program. Linda Buck, vocational special needs coordinator at Southeast, reviewed the survey instrument and was very helpful in relation to the correct terminology to use for the state of Ohio. "Rules for the Education of Handicapped Children" was the reference used to make the final determination of terminology for the form.

Final reviewers of the survey instrument included Louise Vetter and Paul Campbell, Senior Research Specialists at the National Center and Lawrence Dennis, Liaison Supervisor, Vocational/Special Education and Richard A. Macer, Assistant Director, Special Needs Services, both of the Ohio State Department of Education. See Appendix A for survey instrument.

The final survey form was mailed to all vocational evaluators, (77) in Ohio, on January 27, 1987. Addresses were obtained from a mailing list provided by the State Department of Education. A cover letter signed by both the project co-director and Richard Macer of the State Department accompanied the instrument. This letter requested that the survey be returned by February 20, 1987.

A return of 50 (65 percent) of the survey forms was received. Trent Jay, National Center computer programmer developed the programs to manage the survey data. The results are presented in Chapter 2.

Vocational Assessment Reports/IEP Data Collection

A letter of request was mailed to each Vocational Special Education Coordinator in Ohio, with a total of 119 being sent. The letter asked each Coordinator to provide project staff with five randomly selected vocational assessment reports and that student's corresponding IEP from school files. Twenty-eight responses were received, providing a total of 130 vocational assessment reports and their corresponding IEPs to be reviewed. Eight Coordinators responded that they did not have a vocational assessment program, one sent program materials but no vocational assessment reports nor IEPs, and one responded with the fact that he/she did not have the time or staff to send the reports, making a total of 38 responses from the Vocational Special Education Coordinators.

The coding form for the assessment report/IEP analysis went through several stages of development (see final coding form in Appendix E). Draft copies of the form were shared for consultation with Gwen Rockwell, formerly of the University of Washington, Seattle, and Dr. Greg Weisenstein of the University of Washington, Seattle. The coding form was revised four times prior to its present format. Each revision was pilot tested with randomly

chosen assessment reports and IEPs. The coding form was revised to more clearly report the information found on the assessment reports and IEPs.

The form was developed to give descriptive information on the individuals with handicaps, their school setting, the nature of their handicapping condition, type of vocational program, type of school/community placement, nature of support services provided, type of vocational assessment administered, and indications that assessment report information was used to develop the IEP.

The questions that dealt with handicapping conditions and vocational areas were based on guidelines for the State of Ohio. The handicapping conditions were drawn from the Ohio Department of Education publication "Rules for the Education of Handicapped Children." The vocational program areas were identified by using the Department of Vocational Education publication entitled "Taxonomy of Vocational Programs." (State Department of Education, 1986)

The coding form guided the analysis of several aspects of assessment reports. These aspects included: whether students' interests were identified; student strengths and weaknesses (academic and/or vocational); aptitudes (strong and weak) that had been identified; an indication of identified special needs that would increase. The probability of success in the vocational program; the type of vocational program (if any) recommended; and the nature of support services (if any) recommended.

The form also addressed several aspects of each IEP that may have been impacted by the assessment report. These aspects included: indications of whether placement in a vocational program was based on student interest and/or student abilities; indications of whether aptitudes were considered in making placement decisions; and the extent to which support services were indicated on the IEP.

Assessment reports and their corresponding IEPs were reviewed by two coders who checked categories that applied to each question on the coding forms (see Appendix E). Coders also checked specific vocational areas in which individuals with handicaps were being placed. The rater reliability between the two coders was 85.

After all raw data were tabulated on individual coding sheets, information was consolidated onto one master coding sheet. Percentages were computed based on the numbers tallied on the consolidated sheet. The final data is expressed, therefore, in percentage form.

Analysis of Data

The two sets of data were analyzed to determine the current status of the vocational assessment programs in Ohio in relation to meeting the requirements of the Carl Perkins Act. The findings are reported in Chapter 3.

The data compiled from both the survey form and the analysis of the vocational assessment forms and the corresponding IEPs were examined by a focus group of nine experts at the Council for Exceptional Children Annual Conference in Chicago, April 20-24, 1987. From this review, they recommended training needs for vocational evaluators, vocational educators, and special educators. They also recommended priorities for future research, training initiatives and possible funding sources. Those recommendations are further discussed in Chapter 4.

Project staff hosted a meeting with representatives of the Ohio State Department of Education, Division of Career and Vocational Education, to assure that the results of the study would help them meet the training needs of the vocational evaluators throughout the state.

CHAPTER 3

FINDINGS

The information included in this Chapter is based on data obtained from the 50 vocational assessment survey instruments returned and the analysis of 130 vocational assessment reports and corresponding IEPs.

Survey Findings

Background Information

Vocational evaluators in the state of Ohio were found to have considerable experience and background for the position. The average time in the position for the respondents was four years and nine months. For related positions held, 54 percent had been teachers for an average of over 6 years, 46 percent had been evaluators for an average of almost 4 years and 26 percent had been counselors for an average of over 6 years. Other related positions mentioned more than one time included social worker and different types of psychologist.

In relation to academic background, all respondents held bachelor or higher degrees. The greatest number of respondents 64 percent held masters degrees, with 32 percent having bachelors degrees and 4 percent having doctoral degrees. Their academic majors included psychology 34 percent guidance and counseling 32

percent special education 22 percent, vocational education 14 percent, and vocational rehabilitation 12 percent. Other majors mentioned more than once were social work, sociology, and English.

Vocational Evaluator level of knowledge about the different categories of special needs students covered a wide range. The greatest percentage of respondents were least knowledgeable about the visually and multihandicapped and the most knowledgeable about the developmentally disabled and the specific learning disabled. Table 1 indicates the vocational evaluators rating of their knowledge of the categories of special needs students.

TABLE 1

VOCATIONAL EVALUATOR KNOWLEDGE OF SPECIAL NEEDS STUDENTS

	Great Deal %	Good Deal %	Not Enough %	None %
Disadvantaged	34	40	22	2
Multihandicapped	20	38	38	2
Hearing	16	48	32	2
Visually	8	34	52	4
Orthopedically and/or other	14	46	32	4
Severe Behavior	30	44	18	6
Developmentally	62	32	2	2
Specific Learning Disabled	50	36	8	4
Other	2	2	0	0

Of the total number of special needs students assessed by each vocational evaluator, the highest average number was done with the developmentally disabled and the specific learning disabled, with the greatest number of those being evaluated at the ninth and tenth grade levels. Table 2 depicts the average total number of students assessed by the evaluators for each of the categories, then the average number assessed at each grade level.

TABLE 2

STUDENT ASSESSMENT BY GRADE LEVEL

	Total	Grade Level Ungrd	8th	9th	10th	11th	12th
Disadvantaged	24.98	0.04	0.56	6.56	10.20	4.36	2.26
Multihandicapped	3.87	0.88	0.00	1.28	1.08	0.52	0.10
Hearing	1.02	0.16	0.02	0.24	0.42	0.14	0.00
Visually	2.88	0.00	0.00	0.38	0.34	0.12	0.00
Orthopedically	1.14	0.12	0.00	0.26	0.54	0.20	0.00
Severe Behavior	6.02	0.04	0.06	1.82	2.98	0.54	0.02
Developmentally	47.86	0.12	1.22	12.62	28.24	4.18	1.26
Specific Learning Disabled	35.16	0.00	0.30	6.00	24.80	2.00	0.30
Other	10.84	0.52	0.00	0.82	0.16	0.06	0.10

Respondent knowledge of the vocational areas varied considerably. The greatest percentage was least knowledgeable about the field of agriculture and the most knowledgeable about health and home economics. Table 3 presents the percentages for each of the levels of knowledge.

TABLE 3

VOCATIONAL EVALUATOR KNOWLEDGE OF VOCATIONAL AREAS

	Great Deal %	Good Deal %	Not Enough %	None %
Agriculture	6	46	36	10
Business and Office	28	82	16	2
Health	16	86	12	2
Home Economics	14	86	18	2
Marketing & Distributive Education	20	70	26	4
Trade & Industrial	34	82	16	2
Industrial Arts	22	80	24	6

Vocational Assessment Procedures

Over half (56 percent) of the vocational evaluators indicated that they had assistants to help them in their work. Eighteen of the evaluators had one assistant, three had two and one had three assistants. Five evaluators had a half-time assistant and one had a quarter-time assistant. The assistants' most common responsibilities included administering interest surveys (34 percent),

observing student performance (34 percent), and assisting with scheduling (32 percent). All vocational evaluators (100 percent) indicated that observing student performance was a responsibility of theirs and 98 percent indicated that administering interest surveys, administering work samples and conducting community-based assessments were also their responsibility. Table 4 shows the responsibilities of vocational evaluators, assistants and those duties assumed by both.

TABLE 4

RESPONSIBILITIES OF VOCATIONAL EVALUATORS AND ASSISTANTS

	Evaluator %	Assistant %	Both %
Observe Student Performance	100.00	34.00	34.00
Administer Interest Surveys	98.00	36.00	34.00
Administer Work Samples	98.00	6.00	6.00
Classroom-based Assessments	78.00	28.00	20.00
Community-based Assessments	98.00	4.00	4.00
Make Vocational Recommendations	26.00	28.00	6.00
Assist with Scheduling	94.00	32.00	28.00
Write Reports	62.00	14.00	14.00
Staffing/Meeting	26.00	0.00	0.00
Other	90.00	12.00	10.00

The vocational evaluators indicated that the number of students assessed at one time ranged from two to twelve, with two to four being indicated by 42 percent of the respondents, five to seven indicated by 40 percent, eight to ten by 14 percent, and ten to twelve by 2 percent.

The average length of the assessment time was from of nine to fifteen to more than fifty hours. The most frequently selected ranges were 9 - 15 (40 percent), 16 - 32 (34 percent), 23 - 30 (18 percent), with the 31 - 40, 41 - 50, and the more than 50 ranges indicated by only 2 percent of the respondents.

Twenty-four percent of the vocational evaluators indicated that 31 - 50 percent of the students they assessed were already aware of vocational education opportunities and eligibility requirements, 22 percent indicated 1 - 10 percent, 20 percent indicated 11 - 30 percent, 20 percent indicated 51 - 70 percent, 8 percent indicated 71 - 90 percent and 2 percent indicated 91 - 100 percent.

Thirty-eight percent of the vocational evaluators indicated that information about vocational education opportunities and eligibility requirements was provided to students, parents and other teachers two years before assessment, another 38 percent indicated it was provided one year before assessment, 14 percent indicated three years before assessment, and 8 percent did not know.

Information about vocational education opportunities and eligibility requirements was provided by the vocational evaluators (50 percent). Guidance counselors were next (32 percent), with

vocational instructors (22 percent) and vocational education directors (12 percent) following. Other information providers mentioned several times were vocational special education coordinators and work study coordinators.

The vocational evaluators indicated that most of the vocational assessment (64 percent) was conducted one year before entry of the student into the program, with two years selected second (22 percent), first year of program (6 percent) next and other times mentioned included after placement in Occupational Work Adjustment (OWA)/Occupational Work Experience (OWE) and ninth grade evaluations.

Types and sources of student background information received by the vocational evaluator prior to assessment are shown in table 5. Other types of information mentioned frequently included medical information supplied by the special/regular classroom teacher, special education coordinator, parents, administrator/supervisor and/or medical personnel; IEPs supplied by administrator/supervisor, special/regular classroom; and behavior ratings supplied by special/regular classroom teachers, special education coordinator and/or counselor.

TABLE 5

TYPES AND SOURCES OF STUDENT BACKGROUND INFORMATION REVIEWED BY VOCATIONAL EVALUATORS

	Source					
	Special/Regular Classroom Teacher	Administrator/ Supervisor	Special Education Coordinator	Medical Personnel/ Psychologist	Parents	Others
Self-expressed	42.00	0.00	8.00	0.00	22.00	22.00
Interest Survey	0.00	2.00	0.00	0.00	6.00	6.00
IQ Scores	16.00	6.00	6.00	30.00	12.00	12.00
Achievement Scores	36.00	6.00	6.00	12.00	14.00	14.00
Competency Test	16.00	2.00	2.00	2.00	6.00	6.00
Other	38.00	4.00	8.00	4.00	14.00	14.00

Table 6 shows the various strategies used by vocational evaluators to evaluate the vocational programs available to the students they assess. Other strategies mentioned more than once included standardized tests and personal knowledge.

TABLE 6

VOCATIONAL EVALUATORS STRATEGIES FOR EVALUATING VOCATIONAL PROGRAMS

	%
Vocational Skills Test	88.00
Published Literature	28.00
Locally Developed Normative Data	34.00
Multidisiplinary Team Meetings	50.00
Meetings with Vocational Instructors	54.00
Situational Assessments in Vocational Classroom	26.00
Interviews with Student	66.00
Student Observations of Vocational Programs	40.00
Performance on Locally Developed Work Samples	26.00
Others	16.00

Over 30 different products/techniques were used by the responding vocational evaluators to assess student interest. Of these products/techniques, the Wide Range Interest-Opinion Test (WRIOT) was the most used (48% of the respondents). The Micro-computer Evaluation and Screening Assessment (MESA) was used by 26

percent of the evaluators. Nearly all of these users gave both the WRIOT and MESA a high rating for usefulness for assessing student interests. MESA was most used by the evaluators for assessing the interests of students and the specific learning disabled, the disadvantaged and the developmentally and severe behavior handicapped special needs populations. The WRIOT was most used to assess student interests of the specific learning disabled, the developmentally, severe behavior and hearing handicapped categories of special needs students.

Over 30 different products/techniques were used by the vocational evaluators to assess student abilities. VALPAR was used by 98 percent of the respondents, with most all giving it a high rating for usefulness. The Jewish Employment Vocational System) (JEVS) was used by 48 percent of the respondents, with MESA used by 36 percent and BENNETT by 30 percent. VALPAR was most used with the developmentally and specific learning disabled handicapped categories of special needs students. The JEVS also was used most frequently used with the developmentally and specific learning disabled categories of special population students.

Fewer respondents (less than half) completed this portion of the survey form. Over 20 different products/techniques were used by the vocational evaluators to assess student special needs. VALPAR and McCarron-Dial were both used by 8 percent of the respondents. Both were given high ratings for usefulness.

Only 29 (58 percent) of the survey respondents completed the question on what assessment product(s)/technique(s) they found not useful in its original form. Of those completing the question,

44 percent indicated the MEESA, 20 percent indicated the VALPAR, and 13 percent rated the Singer not useful in its original form.

When asked if unlimited funding were available how they would use it, vocational evaluators indicated for computers for data (48 percent), additional assistants (42 percent), inservice training (38 percent), vocational assessment training (28 percent) and interest surveys (8 percent).

Academic support services were the most frequently recommended (92 percent) of the activities/services/modifications to serve special needs students, with vocational support services next (78 percent), instructional methods (74 percent), curricula (54 percent), and classroom environment (48 percent). Only 16 percent indicated they made transportation recommendations. Other items frequently mentioned included medical and job placement.

Vocational Assessment Reports. Vocational assessment reports averaged 6.5 pages in length. The greatest number of vocational evaluators (80 percent) indicated that their vocational assessment reports were of a checklist format, with a much smaller number indicating they used a narrative format. About half of the vocational evaluators developed a handwritten report, while the other half used microcomputer software to generate their reports, with more using self-developed than commercial software. Only a few indicated that their reports were dictated. A standard vocational evaluation report format was used by 74 percent of the vocational evaluators. Twenty-two percent indicated that different formats were used for individual cases.

Table 7 presents the topics covered by the assessment reports prepared by vocational evaluators.

TABLE 7

TOPICS COVERED IN ASSESSMENT REPORTS

	%
Vocational Strengths	94
Vocational Needs	92
Student Interest	94
Achievement Test	72
Aptitude Test	64
Work Samples Results	86
Identified Abilities	62
Student Special Needs	70
Behavior	92
Recommendations for Vocational Program	86
Dot Listing of Possible Jobs	38
ID of Related/Support Services	58
Recommended Adaptations	52

Table 8 shows the persons indicated by the vocational evaluators as receiving the vocational assessment reports. The work study coordinator was most frequently mentioned under "other" as receiving the report. Table 8 indicates how the reports are used in the local school districts in Ohio.

TABLE 8

INDIVIDUALS RECEIVING VOCATIONAL ASSESSMENT REPORTS

	%
Guidance Counselor	68.00
Vocational guidance Counselor	32.00
Classroom Teacher	84.00
Vocational Instructor	42.00
Administrator/Supervisor	34.00
Vocational Special Education Coordinator	74.00
Rehabilitation Counselor	20.00
Psychologist	14.00
Parents	84.00
Students	42.00
Other	34.00

Table 9 indicates how the assessment reports are used in the local school districts in Ohio.

TABLE 9

USE OF VOCATIONAL ASSESSMENT REPORTS

	%
Make Vocational Placement Decisions	80.00
Plan Allocation of Support Services	20.00
Planning Document for IEP Team	58.00
Plan Vocational Goals for Students	66.00
Plan Academic Goals & Objectives	46.00
Documentation for Federal Law	16.00
Provide Comprehensive Vocational Profile	32.00
Alternatives for Vocational Placement	44.00

All vocational evaluators (100 percent) indicated that they hold vocational assessment meetings. Eighty-eight percent indicated that a vocational assessment meeting was held for between 76 - 100 percent of their students. Ten percent indicated they held a meeting for between 51 - 75 percent of their students, and 2 percent indicated a meeting was held for between 1 - 10 percent of the students assessed.

The parents (96 percent) were most often involved in the vocational assessment meeting, with the classroom teacher listed second students third (78 percent), guidance counselor fourth (70 percent), and administrators, vocational guidance

counselors and less frequently. Persons frequently mentioned under "other" were the work study coordinator and the vocational evaluator.

Persons most frequently involved in interpreting the evaluation results at the vocational assessment meeting were the vocational special education coordinator (56 percent) and classroom teacher (26 percent). The vocational evaluator and work study coordinator were most frequently mentioned under "other" as being involved in interpreting the evaluation results. Six percent indicated that the valuation was not interpreted and other (8 percent) did not know who interpreted it.

The vocational evaluators indicated that the classroom teacher was most frequently involved in follow-up and monitoring of the placement decision for the handicapped students they assessed. The vocational evaluator and the work study coordinator were most frequently mentioned under "other" as being the personnel involved.

The vocational evaluators indicated that the guidance counselor, administrator, and classroom teacher were most often involved in monitoring the follow-up and monitoring of the recommended placement decision for the disadvantaged students assessed. The vocational evaluator was the most often mentioned under "other" as being involved in the follow-up and monitoring of the disadvantaged.

Twenty percent of the vocational evaluators indicated that they had an individualized education planning process in place for disadvantaged students.

Vocational Assessment Follow-up. Table 10 indicates the persons involved in the vocational meeting following student assessment, the personnel involved in interpreting the assessment report, and monitoring the vocational placement decision for students assessed.

TABLE 10

PERSONS INVOLVED IN VOCATIONAL ASSESSMENT MEETING, REPORT EVALUATION, AND FOLLOW-UP

Personnel Involved	A Voc Assessment Meeting %	B Interpreting Evaluation %	C Follow-Up/ (Handicapped) %	D Follow-Up/ (Disadvantaged) %
Administrator	32	16	26	28
Classroom Teacher	82	26	68	26
Guidance Counselor	70	8	28	34
Parents	96	4		
Students	78	2		
Vocational Guidance Counselor	24	6	10	14
Vocational Special Education Coordinator	58	56	18	14
Other	50	32	42	30

Vocational Assessment Report/IEP Analysis Findings

The analysis of Vocational Assessment Reports and IEPs yielded a sampling that was 73.8 percent male and 26.2 percent female. Subjects came from a cross section of school settings: 36.2 percent rural, 36.9 percent suburban and 26.9 percent urban school setting was determined by locating each school on an Ohio map and deciding whether it was located in, near, or outside city.

Handicapping condition or disability was determined by looking at both the assessment reports and the IEPs. Due to home schools making their reports free of personal information on each student, 15.4 percent of the reports did not allow the coders to determine handicapping conditions. There were no reports and IEPs that represented the orthopedically handicapped or the health impaired. The breakdown of handicapping conditions or disabilities can be seen in table 11.

TABLE 11

HANDICAPPING CONDITION

Multiple-handicapped	0.20%
Hearing Impaired	0.50%
Visually Impaired	0.70%
Orthopedically Handicapped	0.00%
Health Impaired	0.00%
Severe Behavior Handicapped	4.61%
Developmentally Handicapped	25.4%
Specific Learning Disabilities	46.9%
Cannot Determine	15.4%

It was found that the great majority of the students in the sample was placed in Trade and Industrial Education (50.7 percent). The coders could not determine which vocational program 17 percent of the students in the sample were enrolled in. Table 12 shows the breakdown of the six secondary vocational areas by percentage in which students were enrolled.

TABLE 12

VOCATIONAL PROGRAM AREA

Agriculture	6.90%
Business and Office Education	1.50%
Marketing and Distributive Education	11.5%
Health Occupations	3.8%
Home Economics	12.3%
Trade and Industrial Education	50.7%
Cannot determine	17.0%

When specific vocational areas were analyzed, the two most commonly assigned were Trade and Industrial Education and Marketing Education. The majority of people in Marketing and Distributive Education were placed in Occupational Work Adjustment. See table 13 for a full breakdown of specific vocational areas in which students in the sample were enrolled.

TABLE 13

SPECIFIC VOCATIONAL AREA CHECK LIST

1. Agriculture
   1 Agricultural Production
   4 Agricultural Industrial Equipment and Services
   4 Horticulture*

2. Business and Office
   1 General Office Clerical & Filing, Office Machines
   1 Typing and Related Occupations

3. Marketing and Distributive Education
   1 Marketing Education
   3 Food Service
   11 Occupational Work Adjustment

4. Health Occupations
   1 Dental Assistant
   1 Home Health Aide*
   1 Community Health Aide*
   1 Diversified Health Occupations
   1 Diversified Cooperative Health Occupations (DCHO)

5. Home Economics
   2 Child Development
   2 Food and Nutrition
   6 Child Care*
   1 Food Management & Production Service
   4 Community & Home Service*
   1 Therapeutic Recreation

6. Trade and Industrial
   22 Trade and Industrial Education
   2 Air Conditioning and Heating
   9 Auto Body and Fender
   10 Auto Mechanics
   1 Commercial Art Occupations
   1 Marine Maintenance
   7 Carpentry
   6 Building Maintenance
   2 Industrial Electronics
   3 Electronics
   1 Communications Equipment Occupations
   2 Graphic Occupations
   3 Machine Tool Operation*
   2 Welding & Cutting
   1 Meat Cutter
   3 Small Engine Repair (Internal Combustion)*
   1 Occupational Work Experience

When restrictiveness of placement was considered it was found that the largest number of subjects were placed in a regular vocational program with special academics (48.4 percent). The total breakdown of placement can be seen in table 14.

TABLE 14

RESTRICTIVENESS OF PLACEMENT

Self Contained (Special Education)	6.1%
Regular Vocational Program with Special Academics	48.4%
Regular Vocational Program with Regular Academics	26.1%
Co-op Program	0.0%
Work Study Program	3.8%
Cannot Determine	15.4%

Students that are served by special education are eligible to receive support services. It was found that 64.6 percent of the reports indicated that students in regular vocational programs received some support services. Table 15 gives the full breakdown on the extent of support services provided to special populations as indicated in the IEPs.

TABLE 15

EXTENT OF SUPPORT SERVICES (AS INDICATED IN IEPs)

Support Services not Provided	7.6%
Self Contained with Support Services	4.6%
Regular Vocational Program with Support Services	64.4%
Co-op program with Support Services	0.0%
Work Study with Support Services	3.8%
Cannot Determine	19.2%

Assessment Report Analysis

In the analysis of the assessment reports, data were gathered on whether (student) self expressed interests were reported, whether interest survey results were reported, and whether interests as manifested by work samples were reported. It should be noted that some of the reports contained only one of these factors while others reported all three factors. This information can be seen in table 16.

TABLE 16

STUDENT INTERESTS REPORTED

Self Expressed (student)	86.1%
Interest Survey Results	80.0%
Interests Manifested through Work Samples	64.6%
No Interests Reported	2.3%

Many of the reports gave some indication of strengths and/or weaknesses (student). These strengths and weaknesses were analyzed in two areas: vocational and academic strengths and/or weaknesses. Table 17 shows the data gathered on academic and vocational strengths and weaknesses.

TABLE 17

ACADEMIC/VOCATIONAL STRENGTHS/WEAKNESSES

Academic Strengths Reported	78.4%
Academic Weaknesses Reported	78.4%
Vocational Strengths Reported	96.1%
Vocational Weaknesses Reported	90.7%
No Strengths or Weaknesses Reported	0.0%

Analysis of student aptitude indicated in the reports yielded the information in table 18.

TABLE 18

APTITUDES IDENTIFIED IN THE REPORT

Strong Aptitudes Reported	40.7%
Weak Aptitudes Reported	28.4%
No Aptitudes Reported	53.0%

The reports were analyzed for evidence that special needs of the students were mentioned, thereby increasing the probability that students would be successful in vocational programs. Table 19 shows the findings of the analysis.

TABLE 19

STATEMENT OF SPECIAL NEEDS IN ASSESSMENT REPORTS

Complete	56.9%
Mentioned but not Complete	26.9%
Not Indicated	16.1%

The reports were analyzed for indications of recommendations for vocational placement. The most common recommendation was a regular vocational program with special education academics (41.5 percent). Table 20 gives information on the types of recommendations for program placement found through analysis.

TABLE 20

VOCATIONAL PLACEMENT RECOMMENDED BY ASSESSMENT REPORTS

Self Contained (Vocational Program)	5.3%
Regular Vocational Program with Special Education Academics	41.5%
Regular Vocational Program with Regular Academics	21.5%
Co-op Program	0.0%
Work Study Program	3.0%
Cannot Determine/Not Specified	28.5%

The reports were analyzed for support services recommendations relative to program placement. The most common option was a regular vocational placement with support services (54.6 percent). All of the data on support services recommended in assessment reports can be seen in table 21.

TABLE 21

SUPPORT SERVICES RECOMMENDED IN ASSESSMENT REPORTS

Regular Program with Support Services	54.6%
Self-Contained Program with Support Services	3.8%
Support Services not Provided	9.2%

IEP Report Analysis

IEP reports were analyzed in terms of whether it appeared that student placement was based on student interest, student abilities, or a combination of student interest and abilities. Student placement was most commonly based on student abilities (83.1 percent of the IEPs). A breakdown of which factors appeared or did not appear on the IEPs (interest abilities, etc.) can be seen in table 22.

TABLE 22

FACTORS THAT APPEAR TO INFLUENCE PLACEMENT IN VOCATIONAL PROGRAMS (STUDENT INTERESTS AND/OR ABILITIES)

	Yes	No
Student Interests	69.2%	15.3%
Student Abilities	83.1%	6.9%
Combination Student Interests and Abilities	60.7%	24.6%
Could not Determine or Placement not Indicated		8.5%

The IEPs were analyzed to assess whether student aptitude appeared to be a factor in student placement. In 48.5 percent of the IEPs aptitude was not indicated. The remainder of the data on apparent use of aptitude in student placement can be seen in table 23.

TABLE 23

APPARENT USE OF APTITUDES IN STUDENT PLACEMENT AS DETERMINED ON IEPS

Aptitudes were used on a total basis	9.2%
Aptitudes were used on a partial basis	32.3%
Aptitudes were not indicated	48.5%
Cannot determine basis of placement	5.3%
Vocational placement not indicated	1.5%
Aptitude measured but not used	.7%

The IEPs were analyzed in terms of how well they followed the assessment report recommendations on support services. On 42.3 percent of the IEPs the recommendations were followed completely. See table 24 for the remainder of the data on IEP compliance with recommendations for support services in assessment reports.

TABLE 24

EXTENT TO WHICH IEPS FOLLOW RECOMMENDATIONS IN ASSESSMENT REPORTS CONCERNING SUPPORT SERVICES

Followed Completely	42.3%
Followed Partially	15.4%
*Mentioned, but not Specific Enough to Make Recommendations	23.1%
Not Mentioned	19.2%
Mentioned but not Followed	0.0%

CHAPTER 4

RECOMMENDATIONS

This chapter will review the recommendations that are derived from the data analyses, and will suggest future directions in research within the vocational assessment for special populations area. A general background overview of the current state of vocational assessment that is drawn directly from this data analysis as well as from our technical panel's comments on the data precedes the recommendations section of this chapter.

Background Overview

The survey results and the review of 130 assessment reports have indicated that there is considerable variation in both the type of assessment information reported and the quality of that information. Some of the information presented in the report would be difficult for parents and other school personnel such as vocational instructors, special education coordinators, and classroom teachers to interpret. When reports were not written so school personnel could easily interpret the results, the impact the report had on that student's IEP was diminished.

It appears from the survey results that the respondents have a good range of educational background with degrees in psychology, guidance and counseling, special education, vocational education and rehabilitation. However these same respondents ranked inservice training and vocational assessment training within the top four needs if unlimited funding were available. Given this clearly expressed need for additional training, a majority of our recommendations specify topics for this training initiative.

The 130 vocational assessment reports and corresponding IEP's returned were representative of the population with handicaps that are enrolled in secondary schools. Through the analyses of these reports and IEP's, project staff could determine the impact the assessment had on a student's educational plan. Since approximately 50 percent of the assessment reports summarized the results of tests and work samples without interpreting what the test score meant in terms of education programs and required support services, the impact of these reports on the IEP was minimal. It appears that assisting vocational evaluators on how to provide useful information about a students interest, strengths, weaknesses, and special needs that can be easily translated into specific vocational and academic goals, objectives and support services is necessary to improve the usefulness of vocational assessment. It also appears necessary to assist vocational and special educators in understanding the purpose of many of the vocational tests administered during the assessment. By assisting

both audiences in understanding each others roles and responsibilities, the vocational assessment process will result in higher quality vocational programs with appropriate support services for special populations.

Specific recommendations for evaluators, vocational administrators, instructors, and special educators on how the vocational process can be improved follow.

Recommendations

The first series of recommendations deal with the inservice training that evaluators themselves indicated they needed. The first two topics that need to be highlighted during the inservice program include information about

- how to assess low-incidence disabilities such as the visually impaired, multihandicapped and orthopedically handicapped
- minimum requirements of vocational programs including agriculture, marketing and distributive education and industrial arts.

Recommendation 1: Provide inservice training to evaluators on practices for assessing students with visual impairments, multihandicaps or orthopedic handicaps.

Fifty-six percent of the respondents indicated that they had little if any knowledge about students with visual impairments to recommend an appropriate vocational placement for that student. Evaluators also indicated that they had little if any knowledge about multihandicapped (40 percent) and orthopedically handicapped (36 percent) to adequately assess and make recommendations for

these students as well. It appears reasonable to provide training to evaluators on how to assess these low-incidence populations. If this training is cost-prohibitive because of the low incidence of these populations, it may be cost-effective to send these students out of district for an appropriate assessment. However, Stodden (1987) has reported that assessments done outside of the school have little impact on students educational program. Given that the outside evaluator is not knowledgeable about the types of programs and support services available, this strategy is not the preferred method of assessing low-incidence populations.

Recommendation 2: Provide a systematic approach for informing evaluators about the minimum competencies and the specific abilities necessary to successfully complete the vocational programs.

Evaluators indicated that they did not have enough knowledge about vocational programs in regard to required prerequisites and specific skills and abilities needed for successful completion of vocational programs in order to make accurate placement recommendations. Almost 50 percent of the evaluators rated their knowledge of agriculture as inadequate, and almost a third of the evaluators rated their knowledge of marketing and distributive education and industrial arts as inadequate.

It would be helpful to evaluators if a profile could be established that outlined what skills and academic achievements were required to successfully exit each vocational program. This profile could be designed as a career ladder for each area so that

exiting a vocational auto body program as a muffler repairman may be the lowest level of successful completion of that program. This profile could then be used by evaluators to outline potential placement options for each student, as well as suggestions for academic remediation that may be necessary.

Recommendation 3: Provide inservice training to promote the increased use of situational assessments, locally developed work samples and locally developed norm data, rather than commercial work samples.

Twenty eight percent of the evaluators who responded to the survey indicated a need for vocational assessment training. Survey respondents also reported that commercial assessment instruments such as MESA, VALPAR and SINGER work samples were not useful in their original form. Given that 53 percent of the 130 assessment reports coded did not report any aptitudes, the usefulness of commercial aptitude assessment instruments is in question.

The purpose of vocational assessment is to identify students interests, abilities and special needs so that the student can successfully complete a vocational program and transition into post-school employment. The evaluator's responsibility is to determine if vocational education is an appropriate program for that student, and, if so what program is best suited to that students interests and abilities. When that has been established, then the evaluator must determine the student's special needs.

Special needs can be defined as the discrepancy between the student's current performance and the acceptable entry performance level of the recommended vocational program.

Special needs can range from physical accommodations such as raising a computer stand for a student in a wheelchair, to curricular accommodations like adapting the textbook or how the instruction is delivered. Perhaps more demonstrations will be required by the student and an aide or a peer tutor could be assigned to assist in the delivery.

The evaluator has the perfect opportunity to determine these special needs. By administering locally prepared work samples that vocational instructors agree represent an entry level task of their program, the evaluator can analyze if the student can successfully complete the task, as well as what special accommodations or instructions can capacitate that student to complete the task. Any accommodation should be made only if it is deemed "reasonable." That is, an employer or job coach could make this accommodation at a worksite. Situational assessments and locally developed work samples offer a variety of opportunities, more than any commercial assessment program available, for the evaluator to truly assess a students abilities and special needs.

Recommendation 4: Provide inservice support so that recommended special services, which include, according to the Carl D. Perkins Act, adaptation of curriculum, instruction, equipment and facilities, are clearly stated in assessment reports.

Nearly 30 percent of the assessment reports were of such quality that it was not clear whether special services were being recommended. On the balance of the assessment reports many of the recommended special services were evident, but only implied at best. It was found that all of the reports gave factual information (test results), but very few took that information and converted it into useable recommendations on the types of special services that would potentially help the student being assessed. Based on this evidence, it is clear that assessment personnel need training in converting their factual findings into useable information. What is the purpose of doing assessment and having a report written if the individuals who receive the information can not convert the information and recommendations into actions that will benefit the student being assessed?

Recommendation 5: Provide inservice support so that Special Educators can better use the information found in assessment reports in writing IEPs.

In the analysis of assessment reports and IEPs there were discrepancies on what the assessment report recommended and the action taken as indicated by the IEP. For example, one report recommended that based on the student's interests, the student should be placed in an auto body program. The IEP of the student indicated that he was placed in carpentry. Over 15 percent of the IEPs analyzed did not take into consideration student interest in making placement decisions.

When assessment reports did indicate specific areas of remediation that the student would need assistance in to successfully complete the program the IEPs were of such quality that the coders could not tell if the special educators were planning on providing the specific types of academic support that was recommended. In over 23 percent of the IEPs the term "support services" was mentioned, but not in the specific terms of what support mentioned in the assessment report. For example, an IEP might indicate that a student would receive the services of a vocational special education coordinator and no other special services would be mentioned. The assessment report might indicate that there was a weakness in reading, yet no support would be indicated in that area on the corresponding IEP. Special educators need training in how to convert the information on assessment reports into actions that will make good use of the assessment and will benefit the student's educational progress.

Recommendation 6: Develop a systematic approach to informing students about vocational education opportunities and eligibility requirements.

Sixty-six percent of the evaluators estimated that under 50 percent of the students that they assess are aware of vocational education opportunities and eligibility requirements. Therefore, it appears that vocational school personnel need to improve how they market vocational education opportunities to students and home school personnel such as guidance counselors and teachers.

Although 50 percent of evaluators responded that they were responsible for providing information to students about the various vocational education programs, the survey data indicates that there is not clear consensus as far as who is ultimately responsible for providing this information to students and parents. Given that over 50 percent of the students are not aware of vocational eligibility requirements, and there is not consensus as to who should provide this information, it appears evident that a systematic approach to informing students needs to be developed and implemented.

Recommendation 7: Inservice support should be given to all school personnel in the area of transition from school to post-school employment and career opportunities.

It is a principle of Vocational Education as well as a part of the Carl D. Perkins act that vocational students should be aided in finding employment after finishing school. There were no indicators that transition from school to work was being considered in either the vocational assessment reports or the IEPs. Therefore, the personnel that work with special needs populations need training in transitioning that population from school to work.

Vocational assessment personnel will need training in making projections on student transition. Other personnel, that deal with special needs youth, will need training in collaboration among themselves, as well as with community agencies and employers.

Future Directions

Many implications for future research in the area of vocational assessment can be derived from this study. Through recommendations from the focus group of national experts and insights from the project staff the following suggestions for future research are presented.

- Replicate this study in other states that have a formal vocational assessment program. The following changes in the survey would be suggested.
  - Question 5: Use a breakdown of vocational programs that are available in your state.
  - Question 14: What strategies do you use to "evaluate vocational program requirements." change "evaluate..." to "analyze vocational program requirements"
  - Question 17: "What product/technique would you use if unlimited funds were available?"
    - Add a part A. to this question to determine what type of inservice training is needed
    - Add a part B. to this question to determine what evaluators need a computer for, e.g. report writing, student data, etc.
    - Add the choice of "special educator" to questions 25, 26, 27, 28, and 29
    - Send a list of definitions out with the survey

The focus group felt that replication of this study would serve to improve the vocational assessment program in the following states: Maryland, Virginia, Missouri, Minnesota, Wisconsin North Dakota and Washington, DC.

- Conduct additional research that provides guidelines for assessing students with specific handicapping conditions. For example, products and techniques used with a specific learning disabled student vary from techniques used with multihandicaps.

- Conduct additional research on the effectiveness of the IEP process in planning and implementing appropriate and quality educational programs that lead to transition to post-school employment. This research program may be a longitudinal study to determine the effect over multiple years.

- Incorporate coursework in regular, special and vocational teacher education programs that addresses a review of vocational assessment and the IEP planning process. Given the large number of students with disabilities who are mainstreamed into regular classes, it is essential that all school personnel understand the vocational assessment process.

APPENDICES

ALL INFORMATION WILL REMAIN CONFIDENTIAL.
ONLY GROUP DATA WILL BE REPORTED.

Appendix A

VOCATIONAL ASSESSMENT SURVEY

Please tell us how you conduct your vocational assessment program by providing the information requested on this survey form. This information will help staff at the National Center provide technical assistance to others who are developing vocational assessment programs. Return the completed form in the self-addressed, pre-paid envelope or mail it to Shirley A. Chase, the National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210-1090, by February 20, 1987.

BACKGROUND INFORMATION

1. How long have you been in your current position? _____ (years) _____ (months)

2. What other related position(s) have you held?

		Duration (years)
____	Evaluator	_____
____	Counselor	_____
____	Teacher	_____
____	Other _____ (specify)	_____

3. Which of the following categories describe your educational background:

Highest Academic degree	Major area(s) of study
____ High School	____ Special Education
____ Associate	____ Vocational Education
____ Bachelors	____ Guidance and Counseling
____ Masters	____ Vocational Rehabilitation
____ Doctorate	____ Psychology
	____ Other _____ (specify)

4. How much knowledge do you have about each category of special needs students listed below to assist you in recommending a vocational placement?

1 -- a great deal
2 — a good deal
3 — not enough knowledge
4 — no knowledge

Disadvantaged (Academically and Economically)	1	2	3	4
Multihandicapped	1	2	3	4
Hearing Handicapped	1	2	3	4
Visually Handicapped	1	2	3	4
Orthopedically and/or Other Health Handicapped	1	2	3	4
Severe Behavior Handicapped	1	2	3	4
Developmentally Handicapped	1	2	3	4
Specific Learning Disabled	1	2	3	4
Other _____	1	2	3	4

5. How much knowledge do you have about the following vocational areas in regard to required prerequisites and specific skills and abilities needed for successful completion of the program?

1 — a great deal
2 — a good deal
3 — not enough knowledge
4 — no knowledge

Agriculture	1	2	3	4
Business and Office	1	2	3	4
Health	1	2	3	4
Home Economics	1	2	3	4
Marketing and Distributive Education	1	2	3	4
Trade and Industrial	1	2	3	4
Industrial Arts	1	2	3	4

6. Please provide the following information on students assessed by your program during the 1985-86 school year:

	Number of Students Assessed	Grade Level (Indicate number for each category) Ungraded	8th	9th	10th	11th	12th
Disadvantaged (Academically and Economically)	____	____	____	____	____	____	____
Multihandicapped	____	____	____	____	____	____	____
Hearing Handicapped	____	____	____	____	____	____	____
Visually Handicapped	____	____	____	____	____	____	____
Orthopedically and/or Other Health Handicapped	____	____	____	____	____	____	____
Severe Behavior Handicapped	____	____	____	____	____	____	____
Developmentally Handicapped	____	____	____	____	____	____	____
Specific Learning Disabled	____	____	____	____	____	____	____
Other _____	____	____	____	____	____	____	____

VOCATIONAL ASSESSMENT PROCEDURES

7. What support personnel do you have to assist you with the vocational assessment process?

____ None

____ Assistant(s) (number) Job Title(s) _____

_____

8. What responsibilities are assumed by you, and/or by your assistants?

You	Assistant(s)		You	Assistant(s)	
____	____	Observe student performance	____	____	Make vocational recommendations
____	____	Administer interest surveys	____	____	Assist with scheduling
____	____	Administer work samples	____	____	Write reports
____	____	Conduct classroom-based assessments	____	____	Staffing/Meeting
			____	____	Other _____ (specify)
____	____	Conduct community-based assessments			

9. How many students do you usually assess at one time during a given assessment period?

____ 1
____ 2 - 4
____ 5 - 7
____ 8 - 10
____ 10 - 12
____ more than 12

10. What is the average length of the assessment for each student?

____ 3 hours or less
____ 4 - 8 hours
____ 9 - 15 hours
____ 16 - 22 hours
____ 23 - 30 hours
____ 31 - 40 hours
____ 41 - 50 hours
____ more than 50 hours

11. Of the students you assess for vocational program placement, what percentage already are aware of vocational education opportunities and eligibility requirements?

____ 1% - 10%
____ 11% - 30%
____ 31% - 50%
____ 51% - 70%
____ 71% - 90%
____ 91% - 100%

11a. When is information about vocational education opportunities and eligibility requirements provided to students/parents and other teachers?

____ Three years before entry into a vocational program
____ Two years before entry into a vocational program
____ One year before entry into a vocational program
____ Information is not provided
____ Unknown

11b. What person(s) is responsible for providing information about vocational education programs?

___ Vocational Evaluator
___ Vocational Education Director
___ Vocational Instructor
___ Vocational Counselor
___ Guidance Counselor
___ Other _____
(specify)

12. When is the vocational assessment usually conducted?

___ Two years before expected entry into vocational program
___ One year before expected entry into vocational program
___ First year of vocational program
___ Other _____
(specify)

13. Do you receive background information on each student prior to assessment?

___ yes ___ no

13a. If yes, please check the type(s) and source(s) of the background information.

Type	Source					
	Special/Regular Classroom Teacher	Administrator/ Supervisor	Special Education Coordinator	Medical Personnel/ Psychologist	Parents	Others (specify)
___ Self-expressed interests						
___ Interest survey results						
___ I.Q. scores						
___ Achievement scores						
___ Competency test results						
___ Other _____ (specify)						

14. What strategies do you use to evaluate vocational programs available to the students you assess? Check all that apply, then rank the top four strategies (1 = most used—4).

___ Student's performance on vocational skills tests
___ Published literature and brochures
___ Locally developed normative data
___ Multidisciplinary team meetings
___ Meetings/interviews with vocational instructors
___ Situational assessments in vocational classroom
___ Interviews with student
___ Student's observations of vocational programs
___ Student's performance on locally developed work samples derived from specific vocational programs
___ Other(s) _____
(describe)

ASSESSMENT PRODUCTS/TECHNIQUES

15. Please complete the following chart by listing in column A any products/techniques you have used to assess students' (1) interests, (2) abilities, and (3) special needs. In column B check the target population of the assessment and in column C the usefulness of the technique/product in securing the needed information.

Column A Product/Technique	Column B Target Population									Column C Usefulness			
	Disadvantaged	Handicapped:	Multi	Hearing	Visually	Orthopedically and/or Other Health	Severe Behavior	Developmentally	Specific Learning Disabled	highly useful	useful	of little use	not useful
(1) Interest (e.g., WRIGT, CPS).													
										1	2	3	4
										1	2	3	4
										1	2	3	4
										1	2	3	4
(2) Abilities (e.g., Valpar, MECA, Purdue Pegboard).													
										1	2	3	4
										1	2	3	4
										1	2	3	4
										1	2	3	4
										1	2	3	4
(3) Special Needs (e.g., Pre-Vocational, Behavior Modification).													
										1	2	3	4
										1	2	3	4
										1	2	3	4
										1	2	3	4

16. What product(s)/technique(s) have you used to assess a student's interests, abilities, or special needs that you have found was not useful in its original form?

Product/technique	Target Population

17. What product/technique or personnel would you use if unlimited funds were available? Check all that apply, then rank the top three (1 = high--3).

____ Additional assistants (how many ____)
____ Inservice training for present staff
____ Vocational assessment training for other educational personnel
____ Additional interest surveys (specify)

_____

_____

____ Additional vocational skill tests (specify)

_____

_____

_____

____ Computer for data collection/processing
____ Other (specify)

_____

_____

18. What type(s) of activities/services/modifications have you recommended to accomodate special needs students?

____ Curricular (special books/resource materials)
____ Academic support services (e.g., guidance personnel, classroom aides and/or tutors)
____ Classroom environment (e.g., separate, mainstreamed)
____ Transportation
____ Instructional methods (demonstrations, sequencing)
____ Vocational support services (e.g., classroom aides and/or tutors)
____ Other _____
(specify)

VOCATIONAL ASSESSMENT REPORTS

19. What is the average length of your vocational assessment reports? _____
(pages)

20. Which of the following categories do you discuss in your reports? Indicate how the information was obtained.

		How obtained
____	Vocational strengths/assets	_____
____	Vocational needs/weaknesses	_____
____	Student interests	_____
____	Achievement test results	_____
____	Aptitude tests results	_____
____	Work samples results	_____
____	Identified abilities	_____
____	Student special needs	_____
____	Behavior	_____
____	Recommendations for vocational program(s)	_____
____	DOT listing of possible jobs	_____
____	Identification of related/support services	_____
____	Recommended adaptations	_____

21. What is the format of your vocational assessment reports?

___ Narrative
___ Checklist
___ Combination

22. How are your vocational assessment reports generated?

___ Commercial computer software program
___ Evaluator-developed computer program
___ Dictation
___ Handwritten

23. Do you use a standard vocational evaluation report format?

___ yes ___ no

23a. If no, are different formats used for different individual cases?

___ yes ___ no

24. What individual(s) receive the report?

___ Guidance Counselor
___ Vocational Guidance Counselor
___ Special/Regular Classroom Teacher
___ Vocational Instructor
___ Administrator/Supervisor
___ Vocational Special Education Coordinator
___ Rehabilitation Counselor
___ Psychologist
___ Parents
___ Student
___ Other _____ (specify)

25. How are vocational assessment reports used in your school district. Check all that apply, then rank the top three (1 = high--3).

___ Make vocational placement decisions
___ Plan for the allocation of support services
___ Serve as planning document for the IEP team
___ Plan specific vocational goals and objectives for students
___ Plan related academic goals and objectives
___ Document that federal law has been met
___ Provide a comprehensive vocational profile
___ Provide alternatives for vocational placement recommendations

VOCATIONAL ASSESSMENT MEETINGS

26. Is a vocational assessment meeting held at the end of the student's assessment process?

___ yes ___ no (If no, proceed to question 27.)

26a. If yes, what person(s) is involved?

___ Guidance Counselor
___ Vocational Guidance Counselor
___ Special/Regular Classroom Teacher
___ Vocational Instructor
___ Administrator/Supervisor
___ Vocational Special Education Coordinator
___ Parents
___ Student
___ Other _____ (specify)

26b. This meeting occurs for what percentage of students assessed?

___ 1% - 10%
___ 11% - 25%
___ 26% - 50%
___ 51% - 75%
___ 76% - 100%

27. Who interprets your evaluation results at the IEP team meeting?

___ Guidance Counselor
___ Vocational Guidance Counselor
___ Special/Regular Classroom Teacher
___ Administrator/Supervisor
___ Vocational Special Education Coordinator
___ Parents
___ Student
___ Other _____ (specify)
___ Not interpreted
___ Don't Know

28. Who is involved in follow-up and monitoring of the recommended placement decision for handicapped students you assess?

___ Guidance Counselor
___ Vocational Guidance Counselor
___ Administrator/Supervisor
___ Vocational Special Education Coordinator
___ Special/Regular Classroom Teacher
___ Vocational Instructor
___ Other _____ (specify)

29. Who is involved in follow-up and monitoring of the recommended placement decision for disadvantaged students you assess?

___ Guidance Counselor
___ Vocational Guidance Counselor
___ Administrator/Supervisor
___ Vocational Special Education Coordinator
___ Special/Regular Classroom Teacher
___ Vocational Instructor
___ Other _____ (specify)

30. Do you have an individualized education planning process in place for disadvantaged students (e.g., IVEP's, etc.)?

___ yes ___ no

If you have other information that you would like to share with us on the quality and usefulness of your vocational assessment program in helping special needs youth successfully complete their vocational education program, please indicate on the back of this page.

OSU
The Ohio State University

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION

1960 Kenny Road
Columbus, Ohio 43210-1090

Phone: 614—486-3655
Cable: CTVOCEDOSU/Columbus, Ohio

January 27, 1987

Tony Doskocil
TALLMADGE CITY SCHOOLS
76 North Avenue
Tallmadge, OH 44278

Dear Mr. Doskocil:

Ohio's Department of Education has long been a leader in developing quality education programs to serve handicapped and disadvantaged populations across the state. At a time when federal legislation is mandating assessment services for special needs populations, Ohio has had assessment practices in place for a number of years.

Project staff at the National Center for Research in Vocational Education want to capitalize on your experience to provide better quality technical assistance to state and local education agencies that are developing assessment practices for their special needs populations.

Enclosed is a survey that is designed to give you an opportunity to describe your assessment practices. We are interested in finding out--

- o how you conduct student assessments,
- o what kinds of products/techniques you use,
- o what types of students you assess, and
- o what kinds of reports you generate and how they are used.

We invite you to enclose any copies of assessment reports and/or descriptions of your services that you feel may be helpful to this effort. As a separate component of this study, we will be collecting assessment reports and their corresponding IEP's from Vocational Special Education Coordinators to study the impact assessment reports have on the IEP process.

We thank you in advance for taking the time to complete this survey. Please use the enclosed self-addressed, pre-paid envelope to return this survey and any other information you wish to share by Feburary 20, 1987. If you have any questions or concerns, please feel free to call Shirley Chase at (614) 486-3655.

Sincerely,

Richard A. Macer, md.

Richard A. Macer
Assistant Director
Special Needs Services
Ohio Division of Vocational Education

Shirley A. Chase

Shirley A. Chase, Ph.D.
Research Specialist
National Center for Research
in Vocational Education

RAM/SAC/jir

Enclosure

STATE OF OHIO
DEPARTMENT OF EDUCATION

Appendix C

FRANKLIN B. WALTER
SUPERINTENDENT OF
PUBLIC INSTRUCTION

DARRELL L. PARKS, DIRECTOR
VOCATIONAL AND CAREER EDUCATION
907 OHIO DEPARTMENTS BUILDING
65 South Front Street
Columbus, Ohio 43215

TO: Vocational Special Education Coordinators

FROM: Lawrence Dennis, Liaison Supervisor Vocational/Special Education

DATE: January 24, 1987

RE: NCRVE Study on Vocational Assessment

The National Center for Research in Vocational Education is currently conducting a study to examine the vocational assessment process in relationship to the intent of the Carl Perkins Act. In reviewing this process they are interested in determining the relationship with the development of the individualized educational plan. The attacheded letter describes what the research personel on this project would like to review. If you are able to assist in this review your efforts would be appreciated.

Thank you for your cooperation in this matter.

An Equal Opportunity Employer

OSU

The Ohio State University

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION

1960 Kenny Road
Columbus, Ohio 43210-1090

Phone: 614—486-3655
Cable: CTVOCEDOSU/Columbus, Ohio

February 3, 1987

Julie Vargo
LORAIN COUNTY JVSD
15181 Route 58, S
Oberlin, OH 44074

Dear Ms. Vargo:

We need your help for a project entitled, "A Study of the Vocational Assessment Process as Applied to Vocational Education," which is being conducted at the National Center.

To assist us, we are asking that you send us copies of five vocational assessment reports and their corresponding IEPs that you randomly select from your files. Please remove all identifying characteristics that would relate the materials to an individual student, then staple each IEP to the back of the corresponding vocational assessment report.

Although we would appreciate receiving the materials as soon as possible, we must have them by February 20, 1987, to use them in the project. A self-addressed, pre-paid envelope is provided for your convenience.

If you have a problem in meeting this request, please contact me at (614) 486-3655.

Thank you for helping us in this effort.

Sincerely,

Shirley A. Chase

Shirley A. Chase, Ph.D.
Research Specialist

SAC/md/jir

Enclosure

Assessment Report/IEP Analysis
Coding Form

1. Sex

_____ M
_____ F

2. School Setting

_____ Rural
_____ Suburban
_____ Urban
_____ Cannot determine

3. Handicapping Condition (as indicated on the IEP or VA report)

_____ Multiple-handicapped
_____ Hearing impaired
_____ Visually impaired
_____ Orthopedically handicapped
_____ Health impaired
_____ Severe behavior handicapped
_____ Developmentally handicapped
_____ Specific learning disabled
_____ Cannot determine

4. Vocational Program (as indicated on IEP)

_____ Agriculture Education
_____ Business and Office Education
_____ Marketing Education
_____ Health Occupations
_____ Home Economics Education
_____ Trade and Industrial Education
_____ Cannot determine

5. LRE Placement (as indicated in IEP)

_____ Self-contained (special education)
_____ Regular Vocational Program with Special Education Academics
_____ Regular Vocational Program with Regular Academics
_____ Co-op program
_____ Work Study program
_____ Cannot determine

6. **Extent of Support Services** (as indicated in IEP)

_____ Support Services not provided
_____ Self Contained with support services
_____ Regular Vocational Program with support services
_____ Co-op program with support services
_____ Work Study with support services
_____ Cannot determine

7. **Assessment Report** (check all that apply)

7.1 **Are specific interests identified in the report?**

_____ Self-expressed interests
_____ Interest Survey results
_____ Manifested interests specified (as indicated by work samples)
_____ No interests specified

7.2 **Are specific abilities/deficits (strengths/weaknesses) identified in the report?**

_____ Academics strengths (abilities) are stated
_____ Academic weaknesses (deficits) are stated
_____ Vocational strengths (abilities) are stated
_____ Vocational weaknesses (deficits) are stated
_____ No strengths/weaknesses (abilities/deficits) are stated

7.3 **Are aptitudes identified in the report?**

_____ Strong aptitudes are specified
_____ Weak aptitudes are specified
_____ No aptitudes are specified

7.4 **Are the "special needs" of the student specified so as to increase the probability that the student will be successful in a vocational program?**

_____ Complete
_____ Mentioned but not complete
_____ Not indicated

7.5 What vocational placement in the LRE is recommended in the report?

_____ Self-contained (vocational program)
_____ Regular Vocational Program with Special Education Academics
_____ Regular Vocational Program with Regular Academics
_____ Co-op program
_____ Work Study program
_____ Cannot determine - too general
_____ Not specified

7.6 Extent of Support Services recommended in the report

_____ Support Services not provided
_____ Self Contained with support services
_____ Regular Vocational Program with support services
_____ Co-op program with support services
_____ Work Study with support services
_____ Cannot determine

8. IEP Report (check all that apply)

8.1 Does it appear that student placement in a vocational program is based on:

Yes	No	
_____	_____	Student Interests
_____	_____	Student Abilities (Strengths) (as indicated on work samples)
_____	_____	A combination of student interests and student abilities
_____	_____	Cannot determine basis of student placement
_____	_____	Vocational placement not indicated

8.2 Does it appear that student aptitudes, as indicated by vocational assessment, are used as a basis for placement in a vocational program?

_____ Total basis
_____ Partial basis
_____ Not indicated
_____ Cannot determine basis of student placement
_____ Vocational placement not indicated
_____ Measured but not used

8.3 Are support services specified in the IEP that follow the "special needs" recommended in Vocational Assessment Report?

_____ Followed completely
_____ Followed partially
_____ Mentioned but not in specific terms of support services recommended
_____ Not mentioned
_____ Mentioned but not followed

Appendix E

DEFINITIONS

1. Rural - areas outside of cities

2. Suburban - areas near cities

3. Urban - areas inside of cities

4. Multiple-handicapped

means such a severe impairment, and/or such concomitant impairments, that the child's educational problems make it impossible to accommodate the needs of the child in any program but a program for multihandicapped children. (This definition may include deaf-blind; autistic, and moderately, severely or profoundly developmentally handicapped children.)

5. Hearing impaired

"hard of hearing" means a hearing impairment, whether permanent or flunctuating which adversely affects a child's educational performance but which is not included under the definition of deaf as defined in paragraph K. of this rule.

6. Visually impaired

a visual impairment which, even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children.

7. Orthopedically handicapped

means a severe orthopedic impairment which adversely affects a child's educational performance. The term include impairments caused by congenital anomaly (e.g., clubfoot, spina bifida, absence of some member), impairments caused by disease (e.g., polio-myelitis, muscular dystrophy, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

8. Health impaired

means limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

9. Severe Behavior Handicapped

9.1 The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

a. an inability to learn, which cannot be explained by intellectual, sensory or health factors;
b. an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
c. inappropriate types of behavior or feelings under normal circumstances;
d. a general pervasive mood of unhappiness or depression; or
e. a tendency to develop physical symptoms or fears associated with personal or school problems.

9.2. The term does not include children who are socially maladjusted, unless it is determined that they are severe behavior handicapped.

10. Developmentally handicapped

(mentally retarded) means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior manifested during the developmental period, which adversely affects a child's educational performance.

11. Specific Learning Disabled

means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural or economic disadvantage.

12. Least Restrictive Environment (LRE)

means that, to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped, and that special classes, separate schooling, or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

13. Self Contained

The self contained class shall serve children whose handicapping conditions are so severe that it requires removal from a regular education program to provide part-time or full-time educational services in this program option. Not all children assigned to a self-contained class will necessarily remain with the special education teacher on a full-time basis.

A self contained class program option shall include placement in a self contained class program located in a :

public school building;
separate school in the school district;
public school program located in a separate facility;
county board of mental retardation and developmental disabilities facility;
state residentail school for the deaf or for the blind, or
state institution

14. Integrated with support services

The individual/small group instruction program shall serve handicapped children who are enrolled in regular classes, but who require additional instruction in one or more academic or vocational areas to make satisfactory achievement in regular class placement. This instruction may supplement the instruction provided in the regular classes in which the child is experiencing serious difficulty, but may not supplant the regular classroom instruction in the selected subject areas.

15. Integrated without support services - regular vocational and/or academic class placement.

16. Support services

means transportation and such developmental, corrective and other supportive services as are required to assist a handicapped child to benefit from special education.

17. Co-op Program

means a method of instruction of vocational education for individuals who, through written cooperative arrangements between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but the two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative program.

18. Interests - preference of vocational area as expressed by the student, measured on an inventory or survey of interest, or manifested through a work sample.

19. Abilities/strengths - skills as indicated by tests of achievement or through behavioral observation.

20. Aptitude - an indication of potential ability as measured by a psychometric measure.

21. Special Needs Population

includes the following:
1. handicapped individuals;
2. disadvantaged individuals;
3. adults who are in need of training and retraining;
4. individuals who are single parents or homemakers;
5. individuals who participate in programs designed to eliminate sex bias and stereotyping in vocational education; and
6. criminal offenders who are serving in a correctional institution.

For the purposes of this study we will be referring only to the handicapped segment of the special needs population.

22. Special Needs services

special services, including adaptation of curriculum, instruction, equipment, and facilities, designed to meet the needs described in clause (1).

23. Special Needs

those behaviors that require special needs services for students in order to participate in vocational education.

24. Agriculture Education

Agriculture is composed of a program which involves skills and technical materials related to the production of food and fiber. Instruction is provided which includes learning experiences concerned with developing knowledge, understanding, and skills involved in preparation for or upgrading in occupations requiring knowledge and skills in agricultural subjects. The functions of production agriculture, agricultural supplies, agricultural mechanization, agricultural products processing, horticulture, and the services related thereto, are emphasized in the instruction designed to provide opportunities for students to prepare for or improve their competencies in agricultural occupations. An agricultural occupation may include one or a combination of these functions.

25. Business and Office Education

The body of subject matter, or combinations of courses and practical experience, organized into programs of instruction to provide opportunities for pupils to prepare for and achieve career objectives in selected office occupations. In the instructional process substantive content frequently is comprised of subject matter drawn from other subject matter areas. Learning experiences are designed to lead to employment and/or advancement of individuals in occupations in public or private enterprises or organizations related to the facilitating function of the office. Included is a variety of activities, such as recording and retrieval of data, supervision and coordination of office activities, internal and external communication, and the reporting of information.

26. Marketing Education

Marketing education (distribution and marketing) includes various combinations of subject matter and learning experiences related to the performance of activities that direct the flow of goods and services, including their appropriate utilization, from the producer to the consumer or user. These activities include buying, selling, transportation, storage, marketing research and communications, marketing, finance, and risk management.

27. Health Occupations

comprises the body of related subject matter, or the body of related courses, and planned experiences designed to impart knowledge or develop understanding and skills required in the supportive services to the health professions. Instruction is organized to prepare pupils for the occupations objective concerned with assisting qualified personnel in providing diagnostic, therapeutic, preventive, restorative and rehabilitative services to people, including understanding and skills essential to care and health services to patients.

28. Home Economics Education

comprises the group of related courses or units of instruction organized for purposes of acquiring knowledge and developing understanding, attitudes, and skills relevant to (a) personal, home and family life, and (b) occupational preparation using the knowledge and skills of home economics. The subject matter of home economics includes, in addition to content unique to the area, concepts drawn from the natural and social sciences and the humanities.

29. Trade and Industrial Education

prepares persons for initial employment or for upgrading or retraining workers in a wide range of trades and industrial occupations. Such occupations are skilled or semi-skilled and are concerned with producing, processing, assembling, testing, maintaining, servicing, or repairing any product or commodity. Instruction is provided in (1) basic manipulative skills, safety judgment, and related occupational information in mathematics, drafting, and science required to perform successfully in the occupation and (2) through a combination of shop or laboratory experiences stimulating those found in industry and classroom learning. Included in instruction for apprentices in apprenticeable occupations engaged in a trade or industrial occupation. Also included in training for service and certain semi-professional occupations considered to be trade and industrial in nature.

30. Work Study Program

public sector work experience that is coordinated through the school but is not directly connected with the student's vocational program.

31. Vocational Assessment

the process of answering questions about the development, monitoring, and evaluation of programs and services for a particular student. Assessment is a continuous process, changing in its instrumentation, format, and interpretation depending upon its purposes.

Appendix F.

Consultant Panel

Council for Exceptional Children Annual Conference
Chicago, Illinois, April 20-24, 1987

Dianne Berkell
Department of Special Education
C.W. Post Campus
Long Island University
Greenvale, NY 11548
(516) 299-2127

Donn Brolin
University Missouri-Columbia
Department of Educational &
Counseling Psychology
College of Education
111 Education Building
Columbia, MO 65211
(314) 882-7775

Jim Brown, Associate Professor
University of Minnesota
Room 460 VOTECH Building
St. Paul, MN 55108
(612) 624-7754

Pamela Leconte, Project Director
George Washington University
2201 G Street, N.W.
Washington, DC 20052
(202) 676-7328

Debbie Neubert
Department of Special Education
University of Maryland
Benjamin Building
College Park, MD 20742
(301) 454-2118

Michael Peterson
VOC-AIM
P.O. Box 1104
Starkville, MS 39762
(601) 325-3331

Jeanne Repetto
Office of Career Development
for Special Populations
College of Education
110 Education Building
1310 South Sixth Street
Champaign, IL 61820
(217) 333-2325

Debra L. Kaplan, M.S.C.R.C.
University of Washington
Child Development & Mental
Retardation Unit
WJ-10
Seattle, WA 98195
(206) 543-4011

Greg Weisenstein
907 Miller Hall, DQ-12
University of Washington
Seattle, WA 98195
(206) 545-1807

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